

WHAT IS CLAIMED IS:

1. An isolated polynucleotide comprising a member selected from the group consisting of:
 - (a) a polynucleotide encoding the polypeptide as set forth in SEQ ID NO:2;
 - (b) a polynucleotide encoding the polypeptide as set forth in SEQ ID NO:4;
 - (c) a polynucleotide encoding the polypeptide as set forth in SEQ ID NO:6;
 - (d) a polynucleotide encoding the polypeptide as set forth in SEQ ID NO:8;
 - (e) a polynucleotide capable of hybridizing to and which is at least 70% identical to the polynucleotide of (a), (b), (c) or (d); and
 - (f) a polynucleotide fragment of the polynucleotide of (a), (b), (c), (d) or (e).
2. The polynucleotide of Claim 1 wherein the polynucleotide is DNA.
3. An isolated polynucleotide comprising a member selected from the group consisting of:
 - (a) a polynucleotide which encodes a mature polypeptide encoded by the DNA contained in ATCC Deposit No. 75981;
 - (b) a polynucleotide which encodes a mature polypeptide encoded by the DNA contained in ATCC Deposit No. 75983;
 - (c) a polynucleotide which encodes a mature polypeptide encoded by the DNA contained in ATCC Deposit No. 75976;
 - (d) a polynucleotide which encodes a mature polypeptide encoded by the DNA contained in ATCC Deposit No. 75979;

(e) a polynucleotide capable of hybridizing to and which is at least 70% identical to the polynucleotide of (a), (b), (c) or (d); and

(f) a polynucleotide fragment of the polynucleotide of (a), (b), (c), (d) or (e).

4. A vector containing the DNA of Claim 2.

5. A host cell genetically engineered with the vector of Claim 4.

6. A process for producing a polypeptide comprising: expressing from the host cell of Claim 5 the polypeptide encoded by said DNA.

7. A process for producing cells capable of expressing a polypeptide comprising transforming or transfecting the cells with the vector of Claim 4.

8. A polypeptide selected from the group consisting of: (i) a polypeptide having the deduced amino acid sequence of SEQ ID No. 2, SEQ ID No. 4, SEQ ID No. 6 and SEQ ID No. 8 and fragments, analogs and derivatives thereof, (ii) a polypeptide encoded by the cDNA of ATCC Deposit No. 75981, ATCC Deposit No. 75983, ATCC Deposit No. 75976 and ATCC Deposit No. 75979 and fragments, analogs and derivatives of said polypeptide.

9. An antibody against the polypeptide of claim 8.

10. A compound which activates the the polypeptide of Claim 8.

11. A compound which inhibits activation of the polypeptide of claim 8.

12. A method for the treatment of a patient having need to activate a G-protein coupled receptor comprising: administering to the patient a therapeutically effective amount of the compound of Claim 10.

13. A method for the treatment of a patient having need to inhibit activation of a G-protein coupled receptor comprising: administering to the patient a therapeutically effective amount of the compound of Claim 11.

14. The polypeptide of Claim 8 wherein the polypeptide is a soluble fragment of the G-protein coupled receptor and is capable of binding a ligand for the receptor.

15. A process for identifying antagonists and agonists to the polypeptide of claim 8 comprising:
contacting a cell which expresses a G-protein coupled receptor with a known receptor ligand and a compound to be screened; and
determining if the compound inhibits or enhances activation of the receptor.

16. A method for diagnosing a disease or a susceptibility to a disease comprising:
detecting a mutation in the nucleic acid sequence encoding the polypeptide of claim 8 in a sample derived from a host.

17. A diagnostic process comprising:
analyzing for the presence of the polypeptide of claim 14 in a sample derived from a host.

18. The polynucleotide of Claim 2 which encodes the polypeptide as set forth in SEQ ID NO:2.

19. The polynucleotide of Claim 2 which encodes the polypeptide as set forth in SEQ ID NO:4.

20. The polynucleotide of Claim 2 which encodes the polypeptide as set forth in SEQ ID NO:6.